

residue of hyaluronic acid (Table 3).

Table 3

B2

Test	% N-deacetylation	% N-sulphation	% 6-O-sulphation
HA-N-OS1	5.0 (Dac 2)	4.8	100
HA-N-S1	14.2 (Dac 4)	13.9	99.2
HA-N-O-S1	23.5 (Dac 5)	23.0	98.9
HA-N-O-S1	36.1 (Dac 6)	34.2	96.5

Moreover, by varying the molar quantities of the pyridine-SO₃ complex according to the primary hydroxyl groups (molar ratio of between 0.1 and 1), Method B enables a series of partially 2-N-sulphated and partially 6-O-sulphated derivatives to be obtained.

IN THE CLAIMS

Kindly amend claims 2, 3, 4, 5, 6, 7, 8, 12, 14, 15, 16, 17 and 19 as follows:

B3 2. (amended) The polyurethane according to claim 1, wherein the said polyurethane comprises the repeating unit 4,4'-methylenebis(phenylisocyanate).

B4 ^{sub 2} 3. (twice amended) The polyurethane according to claim 1, wherein the said sulphated hyaluronic acid is selected from the group consisting of:

- A₁) O-sulphated hyaluronic acid, and
- B₂) N-sulphated hyaluronic acid.

4. (twice amended) The polyurethane according to claim 1, wherein the said sulfated hyaluronic acid derivative is selected from the group consisting of:

- A₁) O-sulphated hyaluronic acid, and
- B₂) N-sulphated hyaluronic acid.

B5 5. (amended) The polyurethane according to claim 4, wherein

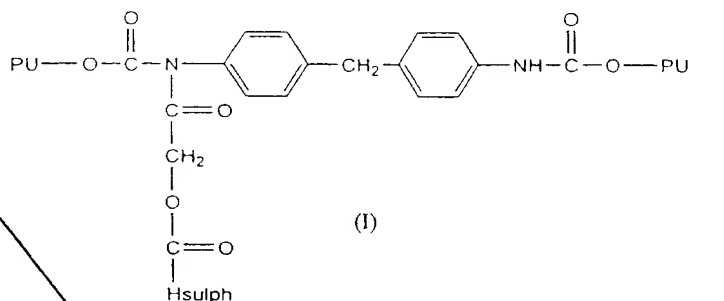
the hyaluronic acid derivatives used to prepare the said sulphated hyaluronic acid A₂ and B₂ are selected from the group consisting of:

the partial esters of hyaluronic acid containing at least one free carboxylic function and the remaining carboxylic function esterified with an aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic alcohol, and

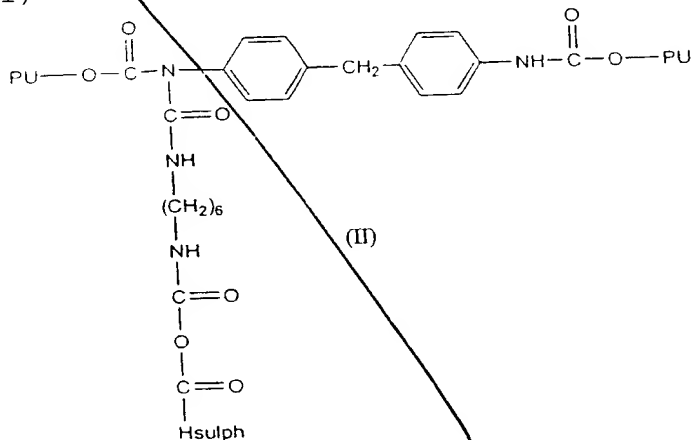
the partial crosslinked esters containing at least one free carboxylic function and the remaining carboxylic functions are esterified with the alcoholic function of the same hyaluronic acid molecule or of a different hyaluronic acid molecule,

the partial crosslinked esters containing at least one free carboxylic function reacted with an aliphatic, aromatic, arylaliphatic, cycloaliphatic or heterocyclic polyalcohol, and wherein cross linking is thereafter generated by means of spacer chains.

sub 6 (twice amended) The polyurethane according to claim 1 of
C3 formula (I)



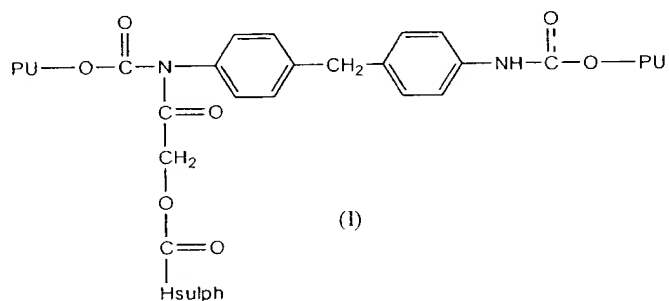
or formula (II)



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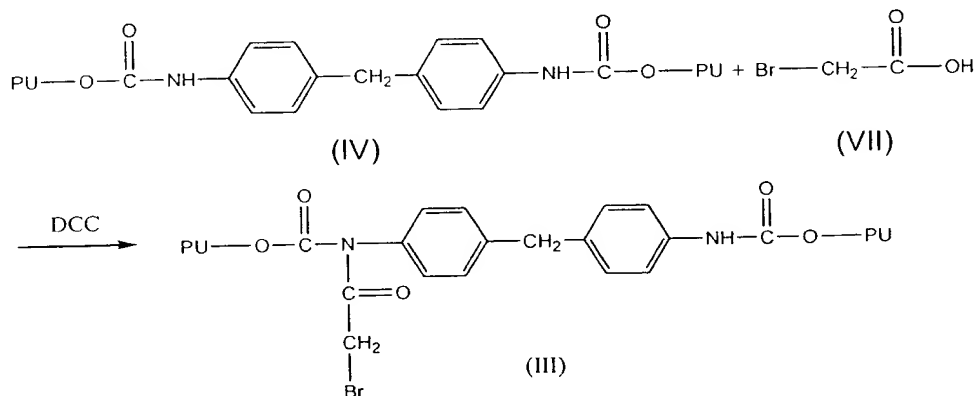
wherein PU is a residue of the polyurethane chain, Hsulph is a residue of the sulphated hyaluronic acid or a residue of a sulphated hyaluronic acid derivative containing a free carboxylic function.

7. (amended) A process for preparing the polyurethane of formula (I)

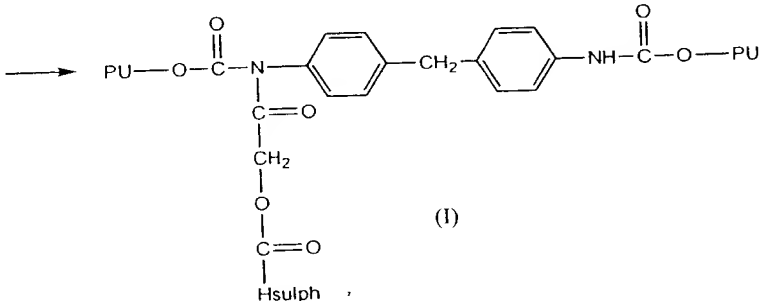


wherein PU and Hsulph are as defined in claim 6, comprising the following steps:

i) the polyurethane (IV) is reacted with bromoacetic acid (VII) in the presence of N,N'-dicyclohexylcarbodiimide (DCC), to obtain the adduct of formula (III)

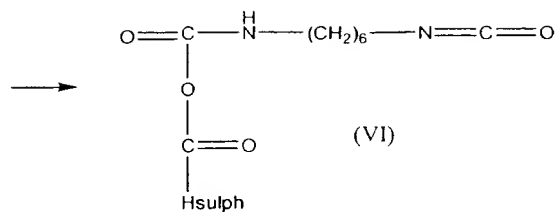


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$$\begin{array}{c} \text{PU} - \text{O} - \text{C}(=\text{O}) - \text{N} - \text{C}_6\text{H}_4 - \text{CH}_2 - \text{C}_6\text{H}_4 - \text{NH} - \text{C}(=\text{O}) - \text{O} - \text{PU} \\ | \\ \text{C}(=\text{O}) \\ | \\ \text{NH} \\ | \\ (\text{CH}_2)_6 \\ | \\ \text{NH} \\ | \\ \text{C}(=\text{O}) \\ | \\ \text{O} \\ | \\ \text{C}(=\text{O}) \\ | \\ \text{Hsulph} \end{array} \quad (\text{II})$$

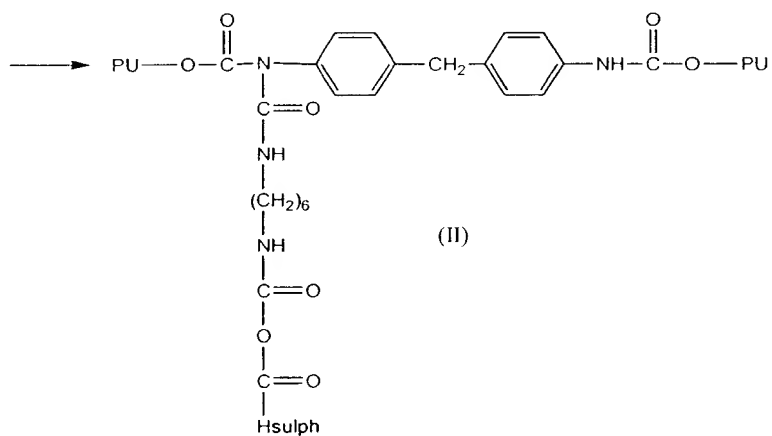
i') HOOC-Hsulph is reacted with hexamethylenediisocyanate (HMDI) (V), to obtain the adduct formula (VI)





wherein Hsulph is defined as above;

(ii') the adduct (VI) coming from step i') is reacted with the polyurethane (IV) to obtain the said polyurethane of formula (II)



B9 ^{SUB 12} 12. (amended) The haemocompatible material according to claim 11, wherein said pharmaceutically active substance is selected from the group consisting of antibiotics, anti-infective, antimicrobial, antiviral, cytostatic, antitumoral, anti inflammatory, wound healing agents, anesthetics, cholinergic or adrenergic agonists or antagonists, antithrombotic, anticoagulant, haemostatic, fibrinolytic, thrombolytic agents, proteins, peptides, polynucleotide, growth factors, enzymes and vaccines.

B10 ^{SUB 13} 13. (twice amended) The haemocompatible material according to claim 9, further comprising at least one natural or synthetic polymer.

B11 14. (amended) The haemocompatible material according to claim 13, wherein said natural polymer is selected from the group consisting of collagen, collagen coprecipitates and glycosamino glycans, cellulose, polysaccharides in the form of chitin, chitosan, pectin or pectic acid, agar, agarose, xanthane, gellan, alginic acid or the alginates, polymannan or polyglycans, starch and natural gums.

^{SUB 15} 15. (amended) The haemocompatible material according to claim 13, wherein said polymer is selected from the group consisting of collagen cross linked with aldehydes, dicarboxylic acids or their halides, diamines, derivatives of cellulose, hyaluronic acid, chitin or chitosan, gellan, xanthane, pectin or pectic acid, polyglycans, polymannan, agar, agarose, natural gum and glycosamino glycans.

16. (amended) The haemocompatible material according to claim 13, wherein said synthetic polymer is selected from the group consisting of polylactic acid, polyglycolic acid, polydioxanes, polyphosphazenes, polysulphonic resins and PTFE.

B12 17. (twice amended) The haemocompatible material according to claim 9, in the form of sponges, films, membranes, threads,